TRB Peer Exchange Questions on Asset Management

Oregon D.O.T.
9-03-04

1. **How is your organization using asset management in decision making and resource allocation?**

The Oregon D.O.T. has used several stand-alone programs for some time now for use in allocating program funding based on condition rating and economic impact. Those include:

Bridge Management System: originally developed internally as a SQL database with "Bridge View" as the front end. We are now transitioning to PONTIS.
Pavement Management System: developed internally and uses deflection data for condition rating.
Landslide/Rockfall Rating System: Originally used the Oregon Rockfall Hazard Rating System, but transitioned into a condition/economic impact system with a GIS front end.
Maintenance Management System: A SQL database used to inventory and record maintenance repairs and costs.

The department has identified over $27 billion in highway assets (not including right-of-way) residing in sixty one components. The data for these components are stored and retrieved from forty eight different data bases and programs. The inventory and condition of most of these components, except bridges, pavements and ITS equipment, is incomplete. The department is now launching a new initiative to fully develop and integrate all systems to develop a Total Asset Management program (see enclosed attachments)

2. **How has your system improved or your program changed due to the use of asset management principles and data?**

The concept of condition rating tied to the financial strategy using bridges, pavements and landslides has made it much easier to negotiate with stakeholders regarding program funding. With a fully integrated system, tradeoff analyses will be made to manage funds between programs in a more systematic and defensible way.

3. **What barriers have you faced to using asset management? Data problems/integration/collection; Percent of system or operation covered; interagency cooperation.**

Human resources and FTE ceilings. The organization has until recently been focused entirely on delivering the Capital Improvement Program, which left not enough resources to manage the system. As components aged, and were repaired or replaced, it became apparent that a systematic approach would be needed, and FTE would have to be realigned to fit the need. This has been done.

4. **Are you using Asset Management for non-highway modes and how?**

Yes, to some extent. These include:

Fleet Management: We use a "Fixed Asset System" and scheduled depreciation based on type and usage of the rolling stock for maintenance and replacement.
Facilities Management: We use a commercial software "Fac Center 7" by Tri Riga to schedule building inspections, record condition ratings to drive the preventative maintenance program. We have about 1200 building in the inventory.
Information Technology Management: We use a commercial product "Remedy Asset Management" to manage our replacement schedule of computer hardware and software, telecommunication devices, inventory and for contract management and purchasing needs.

5. **What improvements would you recommend in the implementation of Asset Management?**
    - Areas that need improvement:

      Partnering with other state and local agencies to take advantage of economies of scale, and creativity. The D.O.T's have the greatest contact with the greatest number of local and state governments due to the linear nature of the highway assets.

    - Future research:

      Economic impacts as a factor in priority rating. Not just the cost/benefit ratio, and inflation index, but the more intangible such as the cost for delay of the motoring public and freight mobility when a highway is closed for staged or emergency repairs, and cost to communities that become isolated and have long detour routes during closures. Costs for environmental mitigations due to changes in regulatory rules that may be made in a replacement cycle.

    - Data:

      Data warehousing and availability, and more consistent national data standards